ABSTRACT OF THE DISCLOSURE

A system and method which employ one or more portable hand held computers and one or more servers, allows a field engineer to complete the entire design, deployment, test, optimization, and maintenance cycle required to implement successful communications networks. The portable hand held computer provides the user with a three-dimensional display of the physical environment in which a communications network will be deployed or optimized. The engineer may take the portable hand held computer into the field, and make alterations to the components, position of the components, orientation of the components, etc. based on on-site inspection. As these alterations to the computerized model are made, predictions for the effects these changes will have on the communications network are displayed to the engineer. Measurements may also be made using equipment connected to or contained in the portable hand held computer, and these measurements may be used to optimize performance criteria. Information can be transmitted to and from the portable hand held computer and the server to allow for complex processing to be performed using portable computer. The system allows the engineer to remain in the field while deploying the communications network, making measurements within the network, receiving optimized predictions on the performance of the network, re-configuring the communications network and associated components, and repeating the entire cycle to achieve maximum possible performance with minimal required time or effort.